

### Al-A'Ali Reinforcement

## Our Products & Services



#### REINFORCEMENT STEEL BARS

Straight Bar Size:

8mm to 40mm

Standard: BS 4449 Grade 500 B & ASTM A615

Length:

6 meters to 12 meters

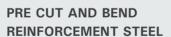


#### STEEL FIXING

We provide services of on site installation of steel with the added value of highly experienced site Engineers and Supervisors. Our steel fixing capabilities include all forms of RC Work.







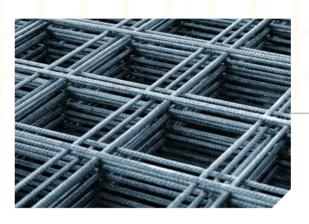
Size: 8mm to 40mm

Stirrups: 8mm to 16mm

Standard: BS 4466/BS 8666:2005

**Production Capacity:** 10000 Tons/Month

\*We provide Rebar detailing services: [Shop drawings and bar bending shedules]







Wire Range: 4mm to 12mm Sheet Size: Max 2.4m x 4.8m\* 50mm to 400mm Spacing: Standard: BS 4483 **Production Capacity:** 5000 Tons/Month

\*Customizable upon request: max 2.7 x 6m





#### WELDED PILE CAGE Cage Length: Customized Cage Diameter: 200mm to 1500mm 12mm to 40mm Main Bar Dia: Spiral Diameter: 8mm to 20mm 100 Cages/Day **Production Capacity:**



BARTEC COUPLERS	3
Method:	Parallel Splicing
Bar Diameter:	12 mm to 40 mm
Production Capacity	1200 Threads/Day

# Al-A'Ali Reinforcement Performance

#### **Economy Through Expertise**

By using our expertise gained over time, knowledge of the market and our ability to anticipate and understand, we are today providing timely, efficient, cost effective and above all, quality products & services to the construction industry.

#### **Key Benefits - Cut & Bend Reinforcement**

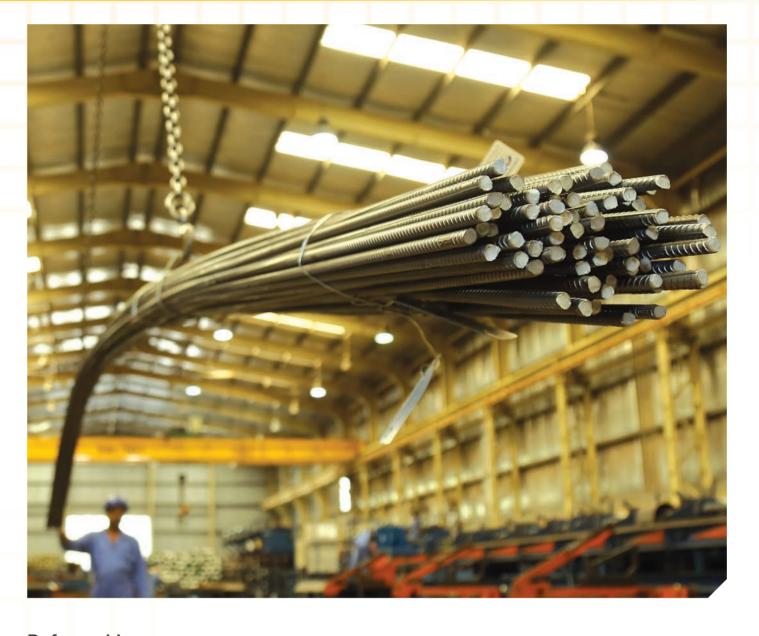
- No wastage of steel for the clients
- Reduced inventory on sites, resulting in less storage space and avoiding rust associated problems
- Rebars are cut & bent to exact specifications, ensuring precision and consistency
- No cutting and bending facilities required, thereby cutting down the extra manpower requirement at site
- Steel is produced and tagged to exact specifications for faster and simpler onsite installation
- Nil exposure to human errors at site higher level of quality control
- Better accountability and traceability of materials
- Delivery of any quantity at site when required

#### Sales and Marketing

The Sales and Marketing department pursues a number of management objectives and strategies, most importantly carrying Al-A'Ali Reinforcement as a reputable, quality conscious and reliable supplier of Reinforcement Steel for the construction industry in Bahrain.

As part of the relentless effort to achieve the objectives, our Sales department continuously communicates with our potential customers and also maintains a very high quality of service. Meeting customer requirements and rigorous quality control practices is at the foundation of the entire operation.





#### **Deformed bars**

We are one of the leading stockists and suppliers of Reinforcement steel bars on the island, delivering a diverse range of reinforcement products to the civil, commercial, residential, and industrial construction projects. We supply a wide variety of rebar sizes, grades, and finishes including epoxy coated rebars. Our extensive network of well-established suppliers from around the world enable us to meet specific customer requirements and guarantee prompt deliveries.

All our Reinforcement steel deformed bars are conforming to BS4449 Grade 500B or ASTM A615 Grade 60.

#### Technical Info

 Diameter:
 8mm
 10mm
 12mm
 16mm
 20mm
 25mm
 32mm
 40mm

Available in Size: 6 meters and 12 meters length.

### Al-A'Ali Reinforcement

## **Cut & Bend Rebars**

#### Methodology

Al A'Ali Reinforcement Co.W.L.L is one of the largest fabricator and installer of cut and bend rebars and related products. Our Factory is built over 8100 square meters and is equipped with automatic production lines from Europe comprising of state of the art machinery that allow us to cut, bend and premanufacture rebar to your exact

requirements while meeting industry standards. All our reinforcement steel is CARES approved and manufactured to British Standards BS 8666/ BS 4466, ensuring the highest standards of material and production quality.

Further, for smooth & efficient execution of manufacturing process, we are backed by a team of Engineers, Supervisors, Foremen, Machine operators and other

technical staff who are qualified and well trained. The product ranges from 8 mm to 40 mm for cut & bend rebars and 8 mm to 16 mm for rebar in coils. Our experienced crew also install reinforcement steel on site according to customer requirements and blueprints.









#### **Engineering Drawing Analysis**

Our team of experienced engineers study and analyse the drawings elaborately and quantify the total steel requirement for the project by eliminating all possible discrepancies in the drawings, while also proposing possible solutions for steel optimization. We offer a complete scheduling and estimating service so that you can focus on the building project rather than having to worry about the quantity and timing of your steel reinforcement supplies.

List of our current machine manufacturers—

**Stema Pedax** Germany, Denmark

EVG Austria

Austria

Schnell Italy

OSCAM Italy

**STREET** England

## Shop Drawing and Bar Bending Scheduling

Our Engineering department comprehensively studies the structural and architectural drawings of each project and segregates them into various stages of work. By coupling our engineering expertise and quality assurance abilities, shop drawings are made on behalf of the main contractor from the given base drawings for each stage of work. The shop drawing elaborates each particular bar with its own identity by a bar mark, diameter, spacing, position and shape. The shop drawing, upon receipt of the consultant's approval, is used for Bar Bending Schedule conforming to BS 4466/BS 8666 explaining details such as member, bar mark, type and size, total numbers, cutting length, and the relevant dimensions. A constant coordination with the contractor/consultant is maintained at all stages of the work to eliminate any possible errors.





#### **Order Execution**

Post approval of the Bar bending schedule and call off from the customer, the same is processed in the Production planning software for the following results:

**Cutting Optimization list** 

Production/Cutting list with Machine allocation

Production Tags which provide required information for each bar while cutting and bending with the machine allocation and cutting sequence which also serve as identification on site to locate each bar with reference to the shop drawing.

#### **Production Execution**

With the latest technology and the new generation machines in operation, comes the realization part under extensive and strict supervision of the Production Department and concurrent Quality Control adhering to British standards BS 4466/BS 8666 without any compromise in quality.

Our state of the art production facility is equipped with latest machinery operated by trained operators, backed up with a skilled and dedicated maintenance team eliminating any chances of bottle necks in the production affecting the quality of the end products and avoiding possible delays in meeting our committed delivery timings.

Our cut & bend line is equipped with Shearing machines, Double Benders, Single benders, Stirrup benders, Straightening machine and Overhead cranes.

The cut and bend factory works in two shifts, round the clock having a Production capacity of up to 300 Tons per day.





### Al-A'Ali Reinforcement

## Welded Wire Mesh

#### Methodology

Al-A'Ali Reinforcement in the pursuit of innovation and excellence has moved on a step further to success and recognition with the advent of the new Wire Mesh plant. The Wire Mesh factory is equipped with the most advanced fully automatic machinery, the most sophisticated and the largest in the Middle East in terms of capacity. Every stage of production is done under the supervision of highly qualified and technically experienced personnel with scientific production procedures under strict Quality Control system. The production line is facilitated with two Cold Rolling lines from TEUREMA, Spain and a Wire Mesh Welder from EVG, Austria and two overhead cranes of 10 Ton capacity each to facilitate uninterrupted production.

#### Technical Info Welded Wire Mesh

Wire range 4mm –12mm Cold Rolled Wire conforming to BS 4482

Maximum Sheet Size 6000mm x 2750mm

Standard BS 4483

Standard for steel fabric for reinforcement of concrete

Production Capacity 100 Tons/Day



#### **Raw Material**

Raw materials such as Plain Hot rolled low carbon steel in the form of coils, conforming to SAE 1018/1008 is imported from leading suppliers across the world.

#### **Cold Rolling**

The factory is equipped with the two latest cold rolling lines from TEUREMA, Spain capable of cold rolling plain hot rolled carbon steel to the required diameter with standard rib pattern complying to BS4482 at a speed as high as 12 m/s with a production capacity of 75 Tons of cold rolled wires per day.

Every stage of production is under strict supervision of experienced engineers and Quality personnel to ensure the best quality. Random samples are taken from each batch for in-house testing in the laboratory for the mechanical properties as per BS 4482.

#### Wire Mesh Welding

The Cold Rolled wire conforming to BS 4482 is used for the production of Welded wire mesh. The Wire Mesh plant is equipped with machines with high level of technological sophistication from EVG, Austria.

Machines are fully automatic and are capable of producing welded wire mesh in various sizes and types at a speed as high as 6 sheets per minute. It has a production capacity of over 100 Tons per day with minimal human intervention.

The Wire Mesh production conforms to BS 4483 standard for steel fabric for reinforcement of concrete. Samples are taken from each batch to ensure quality of welding.

	WIRE MESH SHEE							
Fabric Reference	Longitudinal Wires			Transverse 1	Transverse Wires		Mass	Mass of one sheet
	Nominal Wire Size (mm)	Pitch (mm)	Area (mm2/m)	Nominal Wire Size	Pitch (mm)	Area (mm2/m)	(Kg/m2)	4.8 x 2.4m (Kg)
SQUARE ME	SH							
A393	10	200	393	10	200	393	6.16	70.963
A252	8	200	252	8	200	252	3.95	45.504
A193	7	200	193	7	200	193	3.02	34.790
A142	6	200	142	6	200	142	2.22	25.574
STRUCTURA	AL MESH							
B1131	12	100	1131	8	200	252	10.9	125.568
B785	10	100	785	8	200	252	8.14	93.773
B503	8	100	503	8	200	252	5.93	68.314
B385	7	100	385	7	200	193	4.53	52.186
B283	6	100	283	7	200	193	3.73	42.970
B196	5	100	196	7	200	193	3.05	35.136
LONG MESH	ı							
C785	10	100	785	6	400	70.8	6.72	77.414
C636	9	100	636	6	400	70.8	5.55	63.936
C503	8	100	503	5	400	49	4.34	49.997
C385	7	100	385	5	400	49	3.41	39.283
C283	6	100	283	5	400	49	2.61	30.067

Note: Any other non-standard size also can be made based on specific requirements of the customer





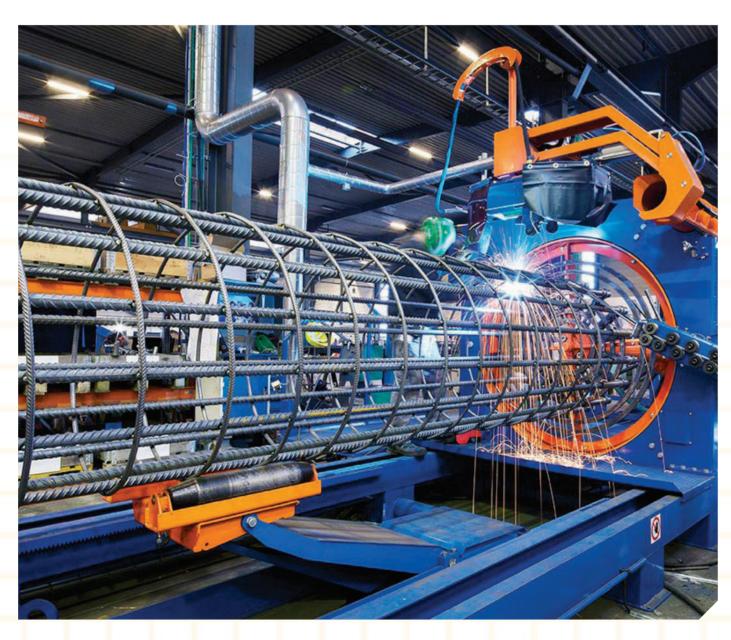
## Al-A'Ali Reinforcement Welded Pile Cage

#### Welded Pile Cage

Al-A'Ali Reinforcement strives towards achieving customer satisfaction and this is further reinforced by the facilitation of two fully automatic Pile Cagewelding machines from STEMA PEDAX, Germany, and SCHNELL, Italy.

The materials used for welded pile cages are deformed steel bars (Hot Rolled) for reinforcement of concrete complying with BS 4449 Grade 500B or ASTM A615 Grade 60 standards. Spirals are made from hot rolled rebar coils. Concrete spacers are attached to a circular ring and welded to the bottom of the Pile Cage to maintain the specified cover at the bottom of the cage.

SI	DESCRIPTION	SIZE
1	Cage Length (Metre)	Customized
2	Minimum Cage Diameter (mm)	200
3	Maximum Cage Diameter	1500
4	Spiral Feeding Pace (mm/m)	50-500
5	Minimum Spiral Diameter (mm)	8
6	Maximum Spiral Diameter (mm)	20
7	Minimum Rod Diameter (mm)	12
8	Maximum Rod Diameter (mm)	40



### Threaded Bar and Couplers

Al-A'Ali Reinforcement is equipped with a standard threading machine from Dextra Manufacturing, Thailand, which is capable of making threaded bars for mechanical splicing. The parallel threading process is realized through a three step manufacturing process namely Cutting, Cold Forging, and Threading.

Al-A'Ali Reinforcement is the authorized supplier of BARTEC Mechanical Couplers, used for connecting concrete rebars and is an alternative to lap splicing.

#### **Manufacturing Process**

#### Cutting

The end of the reinforcing bar is sawn square



#### **Cold Forging**

The sawn end of the reinforcing bar is then enlarged by a Patented cold forging process. The core diameter of the bar is increased to a predetermined diameter.



#### Threading

Finally, the enlarged end is cut (or rolled) to a standard ISO metric thread



#### **Key Benefits**

Practical alternative to lap splicing

Solves bar congestion problems

Shortens construction cycle time

Reduces steel wastage

#### **Technical Specification**

SL	BAR DIA (MM)	METRIC THREAD X PITCH	LENGTH	OD MAX
1	12	M14 X 2.0	28	21.0
2	14	M16 X 2.0	32	24.5
3	16	M20 X 2.5	40	30.5
4	18	M22 X 2.5	44	36.5
5	20	M24 X 3.0	48	34.3
6	22	M27 X 3.0	54	40.5
7	25	M30 X 3.5	60	42.5
8	28	M33 X 3.5	66	49.0
9	32	M36 X 4.0	72	53.0
10	36	M42 X 4.5	84	61.0
11	40	M45 X 4.5	90	68.0

#### **Splicing Methods**

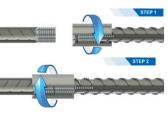
#### Type A

Consisting of 1 standard thread, 1 coupler, 1 extended thread



#### Type B

When the connecting bar is too long or too heavy to turn. Consisting of 1 standard thread, 1 coupler, 1 extended thread



#### Type C

When the connecting bar cannot rotate.

Consisting of 1 standard thread, 1 coupler, 1 extended thread, 1 lock-nut



Provides continuity of reinforcing bars

Enables multiple re-use of foam works

Allows full ductile elongation of bars

No staggering of bars required



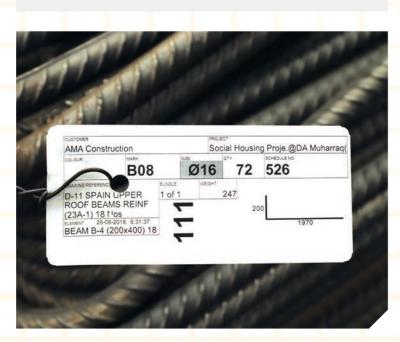
# Al-A'Ali Reinforcement Services

#### **Quality Control and Assurance**

At Al-A'Ali Reinforcement, we are totally committed to achieving and maintaining the highest standards of quality in every area of operation from receiving the order to the delivery and fixing on-site. With this vision we have our own in-house Quality Plan and certified with ISO 9001:2015 by TUV CERT Certification body for Quality Management System of RWTUV Systems GmbH (Germany). We have Six-Step approach towards achieving our quality plan.



- This commitment to quality begins with the raw materials, which we source out from different manufacturers with international certification assuring quality.
- 2. Every batch is received with relevant mill certificates and third party inspection certificates if available.
- 3. A dedicated quality control department in operation will ensure the quality in terms of visual appearance and sampling is done to further test the mechanical and chemical properties in compliance with BS 4449 standard for carbon steel bars for the reinforcement of concrete.
- 4. In process inspection of materials in production is done to ensure quality in terms of dimensions and



shapes as per the approved bar bending schedule and to meet zero tolerance on errors as per the specified standards for production.

- 5. Systematic and on time deliveries with double checks to eliminate any possible non conformities.
- 6. On site inspection while fixing to maintain the standards and to meet the customer requirements.



#### **In-House Testing Laboratory**

To further ensure the quality of material we supply, in house tests of mechanical properties are conducted at regular intervals at our material testing laboratory. Our laboratory is equipped with the latest SATEC Series Static Hydraulic Universal Testing Machine from INSTRON, USA.



#### Warehousing

Al-A'Ali Reinforcement has a separate warehouse with an area of 4000 square meters capable of stocking 30,000 Tons of steel under cover and also has a dedicated 50 T capacity goliath crane that enables the transfer of materials from the warehouse to the production plant.



#### **GPS**

We have the GPS set-up for tracking timely deliveries to customers, and work effectiveness. We deliver and focus on our values of customer service.



#### **Logistics and Delivery**

Al-A'Ali Reinforcement with its own fleet of trucks and trailers has the capacity to deliver materials as per customer requirements round the clock. All the vehicles are fitted with cranes for easier and faster offloading at site and our drivers have 3rd party accredited offloading certification to ensure your delivery is offloaded safely.



All dispatches are well planned and programmed to suit every customer's needs. No matter how large or small any building project is, delivery on time is vitally important. Over 90% of our deliveries are made within 48 hours of the order being placed.



# Al-A'Ali Reinforcement Reference Projects

A small selection of our projects.

For further information on completed or ongoing projects, please contact us directly.

ABG Tower – Bahrain Bay	Isa Town Interchange		
Abraj Al Lulu Tower (A-2)	JBF Polystyrene Factory - Hidd		
Al Ezzel Power Station	KFH Tower at Amwaj		
Al Sahel Resort - Zallaq	Khadija Plaza, Juffair		
ALBA Cast House - Bechtel	King Faisal Highway Detour Road		
ALBA Line -5PDS	King Hamad General Hospital		
Alba PotLine 6 - Bechtel / Gama	Lavista Tower - Juffair		
ALBA Power Station 4 - Alstom	Line 5 Rectiformer @ Alba		
Bahrain City Centre - Pilecage Supply	LSDP-BAPCO		
Bahrain Financial Harbor-Infrastructure	Lulu Island Development		
Bahrain World Trade Center-City Gardens	Marassi Shores		
Banyan Tree Resort & Spa (Al-Areen)	Marina West Apartments		
BAPCO LBOP	Marriott Executive Apartments		
Capricon Tower - Juffair	Mina Salman Interchange		
Customs & Administrative Building –	MOH - Multi Storey building at Ju		
Shaikh Khalifa Port  Dar Building	MOH- Resid <mark>e</mark> ntial Complex - Um A Hassam		
Diploma <mark>t</mark> Apartm <mark>e</mark> nts	MOWH- Bldg @ Hoora		
Dominos Hotel – Al Areen	New Indian Embassy Building - Se		
Era View <mark>s</mark> Tower - Hoora	Oas <mark>i</mark> s Mall - Juffair		
Girls Intermediate School at Busaiteen	One & Only Bahrain resort - Seef		
Hidd Pumping Station Phase III	Petal One Villas-Durrat Al Bahrain		









PPP Housing project at Shamaliya

Reef Island - Apartments & Chalets

Royal Charity Organisation building

Shaikh Khalifa Bin Salman Highway

Smart Structure GF & Pumping Station

Substations - Al Buhair - Al Hunainiya -

SULB DR @ Hidd - Piling Works

Treasure Tower - Dilmunia

Villamar Tower - Bahrain Bay

700 Villas at Diyar Al Muharraq

504 Villas at East Hidd

Shaikh Khalifa Bin Salman Port

Sitra Bridge - Pilecage Supply

Sitra Shopping Mall - Sitra

Stainless Steel Plant
STP Project - Seef

Salmanya

Royal Hanger-Sakhir Airbase
Royal University for Women

Seef Terrace - Seef

**PRAXAIR** 









# Al-A'Ali Reinforcement Certification



#### **TÜV NORD**

Management System EN ISO 9001:2015

Fabrication and Supply
Straight, cut & bend bars, pile
cages, welded wire mesh and
threaded coupler bars for concrete
reinforcement



#### Ministry of Works

Material Compliance Report MCR 2790/2017

Deformed Reinforcing Steel Bars Grade B500B Sizes: 8mm, 10mm, 12mm, 16mm, 20mm, 25mm, 32mm



#### Ministry of Works

Material Compliance Report MCR 2791/2017

Welded Mesh Reinforcement Sizes: A80 (4.5mmØ), A142 (6mmØ), A252 (8mmØ), A393 (10mmØ)

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